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Research Paper

The Effects of Task Orientation and Involvement Load on Learning Collocations

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Abstract

This study examined the effects of input-oriented and output-oriented tasks with different involvement load indices on Iranian EFL learners' comprehension and production of lexical collocations. To achieve this purpose, a sample of 180 intermediate-level EFL learners (both male and female) participated in the study. The participants were in six experimental groups. Each of the groups was randomly assigned to one of the experimental conditions, namely input-oriented tasks with involvement load 1 (True-false), 2 (Matching), 3 (Multiple-choice), and output-oriented tasks with involvement load 1 (Short response), 2 (Fill in the blanks), and 3 (Sentence formation). At the end of the treatment period, the researchers administered a 40-item test in multiple-choice format and a 40-item test in fill-in-the-blanks format to assess the participants' comprehension and production of collocations. The collected data were analyzed using two different two-way ANOVAs and a series of independent-samples t-tests. The results showed that the tasks with higher involvement load indices were more effective on both receptive and productive knowledge of lexical collocations. The results also revealed that output-oriented tasks were more beneficial than input-oriented tasks at all three indices of involvement load. These findings can have theoretical and pedagogical implications for language teachers, researchers, and learners.

Keywords: Input-oriented tasks, Involvement load, Lexical collocations, Output-oriented tasks

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Vocabulary is a vital element in second language acquisition (McCarty, 2005). Knowing a large number of words assists not only the receptive but also the productive knowledge of a language (Kıvrak & Uygun Gökmen, 2019). Collocations comprise a significant component of vocabulary. Therefore, knowledge of collocations is crucial for successful vocabulary use (Zarei & Mousavi, 2016). The importance of collocations, on one hand, and their challenging nature, on the other, have made it a long-standing concern of many practitioners and researchers to find ways of facilitating their learning. Among the many suggestions is the use of tasks. Nevertheless, the use of tasks, or the kind of task to use, has caused substantial controversy in the literature.

One area of controversy surrounds the issue of task orientation. Whereas the proponents of the Natural Approach advocate the use of input-oriented tasks and believe that production had better be allowed to emerge, others (e.g., Swain, 2005; Toth, 2006) have considered a more pivotal role for output-based tasks, claiming that pushing learners to produce output can contribute to vocabulary learning. Still others, like Laufer and Hulstijn (2001), assert that it is the involvement level of a task, not its orientation, which determines its efficacy. They state that input- and output-oriented tasks with similar involvement index will contribute equally to lexical learning. They contend that tasks with greater involvement loads promote vocabulary learning better than those with lower involvement indices regardless of orientation. The present study endeavored to address this issue by answering the following questions:

1. Are input-oriented and output-oriented tasks with different involvement load indices differentially effective on EFL learners' comprehension of lexical collocations?

2. Are input-oriented and output-oriented tasks with different involvement load indices differentially effective on EFL learners' production of lexical collocations?
3. Is there any significant difference between the effects of input-oriented and output-oriented tasks with a similar involvement load index on EFL learners' comprehension of lexical collocations?
4. Is there any significant difference between the effects of input-oriented and output-oriented tasks with a similar involvement load index on EFL learners' production of lexical collocations?

Literature Review

Collocations

Collocations have a crucial role in facilitating language production (Lewis, 1997). According to Martynska (2004), collocation is a combination of words that does not convey the meaning individually. Woolard (2000) presents a more comprehensive definition by stating that collocations are words that occur together in ways that are statistically more likely than random co-occurrence. Hyland (2008) argues that these multi-word structures are necessary for fluent linguistic production. According to Webb and Kagimoto (2011), the more the learners' knowledge of collocations increases, the more their level of accuracy and fluency will be improved. Milton (2009) divided collocations into two categories: grammatical and lexical. Grammatical collocations involve content words plus a preposition or infinitive, whereas lexical collocations consist of content words such as noun + noun (e.g., *washing machine*), adjective + noun (e.g., *strong/weak tea*).

Despite the undeniable importance of collocations, researchers have also argued that collocations are a challenging area for foreign language learners (Hüttner, 2005). A major concern of researchers and language teachers in the

field of lexical collocations instruction has been to find tasks that facilitate the learning of lexical collocations.

Tasks

There has been much debate in the literature for a precise definition of the notion of 'task'. Ellis (2003) argues that a task mainly includes four main features: (a) its primary focus is on (pragmatic) meaning; (b) it has a kind of gap; (c) the completion of the task is done by the use of suitable linguistic resources; and more importantly, (d) it has a clear, non-linguistic outcome. A glance at task-based language teaching literature reveals that there are many categories of a task. When it comes to L2 vocabulary learning, two main task categories scholars emphasize are input-oriented and output-oriented tasks (Zarei & Moftakhari Rezaei, 2016).

According to the Input Hypothesis (Krashen, 1985), language acquisition occurs when the learner receives input containing language forms that are at a higher level than the learner's interlanguage. Similarly, Schwartz (1993) argues that although input is insufficient for language learning, it enriches an innate system to aid language growth. Among the input-oriented tasks that can be used to teach L2 vocabulary are true-false, matching, and multiple-choice tasks. On the other hand, Swain (2000) believes that output-oriented tasks cause learners to take control of their learning. Swain and Lapkin (1998), also, argue that output tasks can pave the way for learners to modify their output by noticing their linguistic shortcomings.

A vast body of research has examined the application of tasks in L2 vocabulary learning (Hazrat, 2015; Shahbazy & Oghli, 2015; Shamsi & Rahimy, 2017; Zarei & Afrash Ab, 2013). For instance, Webb and Kagimoto (2009) explored the impact of four types of tasks (three glossed sentences and one cloze) on Japanese EFL learners' receptive and productive knowledge of

collocations. They found a significant difference between the receptive knowledge of collocations on the pre-test and post-test. However, they reported no significant difference among input and output tasks on each of the tests. They also realized that learners with a high proficiency level were highly better on the productive test, whereas lower-level participants showed better performance on the receptive test. In another study, Ertürk (2017) tried to compare the impact of two types of vocabulary tasks, receptive and productive, on the learning of collocations. The results revealed that the participants in the receptive group got better scores on a test of receptive knowledge of collocations and meaning than on the productive one, though the differences were not significant. Boers, Demecheleer, Coxhead, and Webb (2014) compared the effect of the verb-noun matching tasks on learning collocations including linking verb and noun, verb insertion, and underlining the verb along with the insertion of the whole collocation. Although they found no meaningful difference between giving the collocation intact or separately, they concluded that the most beneficial way of teaching collocations is likely supplying students with the collocations intact.

Involvement load hypothesis

The Involvement Load Hypothesis (ILH), proposed by Hulstijn and Laufer (2001), is a theory of vocabulary learning based on which the efficacy of a task in vocabulary learning depends on the involvement level of the task. The basic contention of this hypothesis is that the amount of involvement in processing unfamiliar words is a necessary condition for the retention of these words (Maftoon & Sharifi Haratmeh, 2012). The construct of involvement includes three principal elements: need, search, and evaluation. Need is a motivational, non-cognitive construct, whereas search and evaluation make the cognitive dimensions of involvement. Laufer and Hulstijn (2001) state that

need and evaluation can be in two prominence degrees of moderate and strong, while the search component can be either present or absent. Moderate need refers to when it is externally enforced, while a strong need is self-imposed. Evaluation is moderate when it entails learners to compare several lexical items or recognize different meanings of a word in a specific context; strong evaluation requires deciding on other words that combine with a new word and create novel sentences. Search is the learner's endeavor to find out the meaning of an unfamiliar L2 lexical item by looking it up in a dictionary or consulting other sources, e.g., an expert. All these factors, along with the levels of their importance, constitute involvement load expressed in terms of involvement index (none = 0, moderate = 1, and strong = 2). According to Laufer and Hulstijn (2001), a task in which these elements are strong has a higher involvement load.

In an empirical study, Hulstijn and Laufer (2001) studied the effectiveness of involvement load on the retention of unfamiliar words in two different experiments: the Dutch-English and the Hebrew-English. The results of the Hebrew-English experiment revealed that, on both post-tests, the composition writing group (index = 3) outperformed the gap-filling group (index = 2), and the gap-filling group obtained higher scores than the reading group (index = 1). Moreover, the findings of the Dutch-English experiment showed that the composition writing group was more successful than the gap-filling and the reading groups on both post-tests; yet, there was no notable difference between the gap-filling and the reading groups. Furthermore, Namaziandost, Hosseini, and Utomo (2020) aimed at comparing the effectiveness of the level of involvement load of tasks, i.e., lack of involvement level versus high level of involvement, on EFL learners' L2 lexical learning. The results confirmed the significant role of high involvement load in the development of vocabulary knowledge. Asadzadeh

Maleki (2012) attempted to see whether L2 word learning in listening comprehension is contingent upon task involvement load. She divided 80 pre-intermediate EFL learners into one control group and three experimental groups. The participants in the experimental groups completed vocabulary learning tasks with different involvement load levels as follows: Group 1 used multiple-choice listening questions including marginal glosses unrelated to the questions (index = 0); group 2 used multiple-choice listening questions with marginal glosses related to the questions (index = 1); group 3 used multiple-choice listening questions with relevant marginal glosses plus writing sentences using the target words (index = 3). The results substantiated the claims of ILH, meaning that the learners in groups 3 and 2 with higher involvement loads significantly outperformed those in group 1. Results of other studies (Karalik & Merç, 2016; Keating, 2008; Pourakbari & Biria, 2015; Sarbazi, 2014) also suggest that as the involvement level of a task increases, the vocabulary retention gets better.

Recent empirical research on Involvement Load Hypothesis shows that scholars have looked into this hypothesis from various perspectives. For example, Ahmadi Fatalaki (2014) studied the role of modality- listening and reading- on intermediate EFL learners' vocabulary learning. The participants received three tasks: Multiple-choice, gap-filling, and composition writing with load indices of 1, 2, and 3, respectively, through both listening and reading activities. The results of immediate post-tests showed that reading-based input was more effective than listening-based input in enhancing vocabulary retention. The results of delayed post-tests, however, revealed no significant difference between the groups. To examine the role of proficiency and evaluation component in HIL, Soleimani and Rostami Abu Saeedi (2016) compared the effectiveness of sentence formation (strong evaluation), fill-in-the-blanks (moderate evaluation), and multiple-choice questions (no

evaluation) on high and low proficient learners' vocabulary learning. The results showed statistically significant differences between high and low proficiency learners' post-test scores on all three tasks. The best performance, however, was related to the group of low proficiency learners doing sentence creation tasks with strong evaluation.

Ghabanchi, Davoudi, and Eskandari (2012) compared the effects of different task types with the same and different involvement degrees on lexical learning. The results of Experiment 1 revealed that higher loaded tasks were more efficient in immediate and delayed word achievement than lower loaded tasks. Experiment 2 showed no significant difference in the effect of different kinds of tasks with identical levels of involvement load on immediate vocabulary learning.

Several studies have endeavored to cast light on the role of type and orientation of tasks in addition to involvement load in L2 lexical learning (Alcaraz-Mármol & Almela, 2013; Karalik & Merç, 2016; Karimi & Jahani, 2014; Sarani, Mousapour Negari & Ghaviniyat, 2013; Sarbazi, 2014). In a study, Maftoon and Sharifi Haratmeh (2012) investigated the effectiveness of two factors of involvement load and task orientation (input and output) on Iranian EFL learners' vocabulary knowledge. The results revealed that in addition to the construct of involvement load, the orientation of task- input or output- is a determining factor in task effectiveness in vocabulary learning.

Tahmasbi and Farvardin (2017) compared the effects of four output task types- paragraph writing, combining, sentence formation, gap-filling, and translation with different indices of involvement on EFL learners' word knowledge. The findings showed that the paragraph writing task group, with the highest involvement load index, outperformed the other experimental groups. In another study, Soleimani and Rahmanian (2015) compared the effect of two input tasks- gap-filling (index = 2) and multiple-choice reading

comprehension questions (index = 1)- on advanced EFL learners' vocabulary knowledge. The results revealed that the gap-filling task with a greater level of involvement was more successful than the other task in improving the learners' lexical knowledge. This finding supports Laufer and Hulstijn's (2001) claim that the involvement load index of a task is a determining factor irrespective of task type.

A glance at the above review shows that although several studies have explored the impacts of both task orientation and involvement level on vocabulary learning, there is little research on how task orientation might interact with task involvement load in affecting knowledge of lexical collocations. In an attempt to address this gap, the present study aims at probing the effect of input-oriented and output-oriented tasks with different indices of involvement load on the learning of English lexical collocations.

Method

Participants

The participants of this study were initially 205 Iranian EFL learners at lower-intermediate level of proficiency studying English at four private language institutes of Zabansara, Kish, Gouyesh, and Marefat in Khorramabad. The researchers selected the participants through convenience sampling and checked their homogeneity using parts 1 to 7 of the Key English Test (KET). After the administration of the test, 25 learners were eliminated from the study due to different language proficiency; those who scored more than one standard deviation away from (above or below) the mean were excluded from the study. There remained 180 participants to take part in the study. They consisted of 104 females and 76 males whose ages ranged from 18 to 35. They were randomly assigned to six experimental groups, each with 30 participants. The reason for their selection was two-fold; first, it was

necessary to make sure that they were not familiar with the target collocations; second, the number of participants at more advanced levels was limited.

Instruments and Materials

For the purpose of this study, the following materials and instruments were used:

Key English test. To ensure the participants' homogeneity in terms of language proficiency, parts 1 to 7 of KET involving 50 items were administered to the participants. Part one contained five items in matching format; part two included five items in a three-option multiple-choice format in which the participants had to choose one of the given choices to fill in the blank of a sentence; part three consisted of ten items in conversation format. In the first five items, the participants had to choose the best choice from the given alternatives in response to a given cue. In the other five items, the participants matched two columns that included two sets of statements to make a conversation between two people. Part four included a passage followed by seven multiple-choice items. Part five contained a cloze passage in which each blank had to be completed through choosing the best word from among three given alternatives; parts six and seven included productive items. Part six (five items) entailed the participants to read the descriptions of some jobs and write that job in the blanks provided. The initial letter of the target word was given; part seven contained ten gap-filling items. The participants were required to read a postcard and use their knowledge to fill in the blanks. Each blank had to be filled with only one word. The oral section of the test was not included for practical reasons. KET has been used extensively in many different EFL/ESL contexts. Nonetheless, since only a sub-test of KET was used here, to recheck the reliability of the sub-test in the context of this

study, the KR-21 formula was applied. The reliability index of the sub-test turned out to be .77.

Pre-test. The researchers administered a pre-test to all the participants before the treatment to assess their background knowledge of the target lexical collocations. The pre-test contained 100 English sentences, each of which included one collocation. In each sentence, one part of each target collocation was given, and the other part was omitted. This was done to make sure that the participants understood the purpose of the test and did not fill the blanks using words other than the target collocations. The participants were required to supply the missing words in the sentences. The target lexical collocations were selected from *Oxford Collocations Dictionary for Students of English*, *English Collocations in Use* (McCarthy & O'Dell, 2006), student's book 4 of *Touchstone* for learners at intermediate level. The collocations included the following structures: noun + noun, adjective + noun, verb + noun, noun + verb, verb + adverb, and adverb + adjective.

To answer the research questions, the researchers developed the following tasks. It is worth noting that the index of involvement load of these tasks was measured on the basis of three degrees of value (none, moderate, and strong) for each component of task-induced involvement (need, search, and evaluation) proposed by Hulstijn and Laufer (2001) and Laufer and Hulstijn (2001).

Input-oriented tasks. *True-false Tasks:* These tasks consisted of marginally glossed texts accompanied by true-false sentences. Each sentence contained one collocation. The participants had to read each sentence to decide whether it is true or false. The involvement load index of this task was one because the need was moderate while search and evaluation were absent.

Matching Tasks: In matching tasks, the participants had to read texts that were marginally glossed. Then, on a separate page, they were given a

matching activity in which the first part of a lexical collocation in one column (column A) was matched with its second part in the other column (column B). There was one extra item in column B. This task had moderate need, moderate evaluation, and no search. Thus, the involvement load index of this task was $2 (1 + 0 + 1)$.

Multiple-choice Tasks: These tasks included texts that were not marginally glossed. The participants had to look up the collocations in a dictionary. As Silva and Otwinowska (2017) argue, a task will be more effective if the search component (i.e. reading with a dictionary) is present. Each text contained blanks, for each of which four alternatives were given after the text. To fill the gaps, the learners had to choose the right collocations from among the alternatives presented in multiple-choice form. This task had moderate need, search, and moderate evaluation. Therefore, its involvement load was $3 (1 + 1 + 1)$.

Output-oriented tasks. *Short response Tasks:* In these tasks, the learners were given marginally glossed texts to read. Then, on a separate page, the collocations in Persian were presented to the participants, and they were asked to supply their English equivalents. This task induced a moderate need while search and evaluation were not present. Thus, the involvement index of this task was $1 (1 + 0 + 0)$.

Fill in the blanks Tasks: Here, the participants were given texts that were not marginally glossed. In each text, gaps were made by omitting collocations. One part of the target collocation and the Persian equivalent of the whole collocation were given as cues in each blank. The blanks had to be filled with the collocations provided by the learners. This task-induced moderate evaluation, moderate need, and no search. Therefore, its involvement load was $2 (1 + 0 + 1)$.

Sentence Formation Tasks: Learners had to read the same marginally glossed texts. Afterward, they were asked to use each of the target lexical collocations to generate new English sentences. In this task, the need was moderate, the search was absent, and the evaluation was strong. The involvement load index of this task was 3 (1 + 0 + 2).

Post-tests. The post-test package consisted of two types of test: a multiple-choice test and a fill-in-the-blanks test (with 40 items each) were administered after the treatment to measure comprehension and production of collocations, respectively. Since the post-tests were developed by the researchers, to ensure their content validity, both the content of the tasks and that of the posttests were carefully examined by several experts. As a result, some items were modified. Moreover, the KR-21 formula was used to estimate the reliability of the post-tests. The reliability indices of the comprehension and production tests were .78 and .81, respectively.

Procedure

Initially, the participants of the study were chosen through convenience sampling. A sample of KET with the characteristics mentioned above was administered to ensure homogeneity. Those who scored between +1 and -1 standard deviation from the mean formed the main participants. Each group of participants was assigned to one of the experimental conditions randomly. Before the treatments, to reduce the effect of the participants' previous knowledge of collocations, the pre-test was administered to all the experimental groups. Only the unfamiliar collocations were selected for inclusion in the post-tests.

In the treatment stage, six kinds of tasks were designed for different treatment conditions. Each of the experimental groups received an average of seven new collocations each session; then they practiced using one of these

tasks: True-false task (Task A); Matching task (Task B); Multiple-choice task (Task C); Short-response task (Task D); Fill-in-the-blank task (Task E); and Sentence formation task (Task F). The three tasks of True-false, Matching, and Multiple-choice were input-oriented tasks with the involvement levels of 1, 2, and 3, respectively. In contrast, the Short-response, Fill-in-the-blanks, and Sentence formation tasks were output-oriented tasks with the involvement indices of 1, 2, and 3.

In task A, the learners received the glossed passages which contained new collocations. They were required to read the texts and answer a set of questions in true-false format. In task B, the participants were asked to read the passages glossed marginally and understand new collocations. They then had to match two columns, which included two parts of a lexical collocation. In task C, the students had to read the texts including the blanks, and looked up new lexical collocations in a dictionary. They then were required to fill in the blanks choosing the best alternative from among four options. In task D, the learners were asked to read the glossed passages and then write the English equivalent of lexical collocations given in Persian. In task E, the students were given non-glossed texts which consisted of blanks. To fill in the gaps, they had to pay attention to the Persian equivalent and one part of the collocation provided in each blank. In task F, the learners received marginally glossed passages that contained new lexical collocations. They were asked to read these texts and create new sentences using the target lexical collocations.

The treatment lasted 17 sessions (2 sessions a week), of which the first two sessions were allocated to the KET test and the pre-test, 14 sessions to treatment, and one session to the post-tests. It is worth noting that about an hour was allocated to each experiment session. After the treatment, two post-tests were administered to all the participants.

The two-way Analysis of Variance (ANOVA) procedure was utilized to answer the first two questions. In addition, a series of independent samples t-tests were used to answer the third and fourth research questions.

Results and Discussion

Results

The first research question sought to compare the effects of input and output-oriented tasks with different loads of involvement on the comprehension of lexical collocations. To this end, a two-way ANOVA was used. Before doing so, the assumptions of two-way ANOVA were checked. First of all, the data were assessed for the assumption of equal variances. Levene's test result ($F_{(5,174)} = .781, p > .05$) showed that this assumption was not violated. Kolmogorov-Smirnov statistic was also checked. The result ($KS_{(180)} = .07, p > .05$) showed that the assumption of normality of scores was also met. Besides, the ID values of the most extreme cases were checked in the Extreme Values table. Next, the value of 5% Trimmed Mean was checked in descriptive statistics to see whether or not the extreme scores highly affect the mean. It was observed that the values of the original mean and the newly trimmed mean were not very different, suggesting that the extreme scores did not have a strong influence on the mean.

After checking all of the assumptions, descriptive statistics, including mean, standard deviation on the collocations comprehension test, were summarized in Table 1.

Table 1.

Descriptive Statistics for the Comprehension of Collocations

Task orientation	Involvement Load	N	Mean	Std. Deviation
Input-oriented Tasks	1	30	17.06	3.609
	2	30	18.63	4.521
	3	30	22.81	4.770
	Total	90	19.50	5.048
Output-oriented Tasks	1	30	20.70	3.640
	2	30	23.43	3.490
	3	30	26.60	3.682
	Total	90	23.57	4.310

Table 1 indicates that although the highest mean belongs to output-oriented tasks, both output-oriented and input-oriented tasks with higher involvement loads gained higher mean scores than those with lower indices of involvement load. The differences among the groups are displayed graphically in Figure 1.

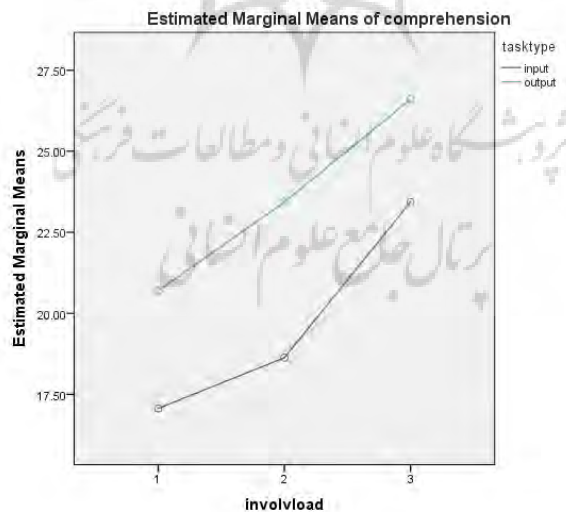


Figure 1. Means Plot of Collocations Comprehension Post-Test

The tests of between-subjects effects were used to see if the differences between the means are statistically significant. Table 2 contains the result.

Table 2.

Tests of Between-Subjects Effects for Collocations Comprehension

	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1856.178 ^a	5	371.236	23.361	.000	.402
Intercept	84326.756	1	84326.756	5306.511	.000	.968
Task orientation	672.800	1	672.800	42.388	.000	.196
Involvement Load	1162.144	2	581.072	36.566	.000	.296
Task orientation* Involvement Load	21.233	2	10.617	.668	.514	.008
Error	2765.067	174	15.891			
Total	88948.000	180				
Corrected Total	4621.244	179				

Table 2 shows no statistically significant interaction between the effects of task orientation and involvement load on the comprehension of lexical collocations, ($F_{(2, 174)} = .668, p > .05$). In other words, there is no significant difference in the effect of involvement load on collocations comprehension for input-oriented and output-oriented tasks. However, there is a statistically meaningful difference in the comprehension test scores between input-oriented and output-oriented tasks ($F_{(1,178)} = 42.38, p < .0005$). There are also statistically significant differences among three involvement load indices, ($F_{(2,177)} = 36.56, p < .0005$). To locate the differences among the levels of involvement load in input and output-oriented tasks, the Scheffe post hoc test was run.

Table 3.

Scheffe Test Results for the Effects of Involvement Loads on Collocations Comprehension

	(I) involvement load	(J) involvement load	Mean Differences (I-J)	Sig.
Input-oriented tasks	1	2	-1.57*	.000
	2	3	-5.75*	.000
Output-oriented tasks	1	2	-2.73*	.000
		3	-5.90*	.000
	2	3	-3.17*	.000

Table 3 shows statistically significant differences among all three involvement load indices. In other words, increasing the involvement load index of both input-oriented and output-oriented tasks results in better comprehension of lexical collocations. Besides, the values of partial eta squared for task orientation and involvement load were .19 and .29, respectively, both of which show a large effect size, according to Cohen (1988).

The second question aimed to compare the effects of input-oriented and output-oriented tasks with different indices of involvement load on the production of lexical collocations. For this purpose, a two-way ANOVA was used. Before that, its assumptions were checked. The results of Levene's test ($F_{(5, 174)} = .93, p > .05$) and Kolmogorov-Smirnov test ($KS_{(180)} = .06, p > .05$) showed that the assumptions of homogeneity of variances and normality of scores were both met.

After checking all the assumptions, descriptive statistics on the production test of lexical collocations were summarized in Table 4, which shows that output-oriented task groups with involvement load indices 3 and

2, and input-oriented task groups with involvement load index 3 have the highest mean scores, respectively. The lowest means belong to input-oriented tasks with involvement load indices of 2 and 1, respectively. In other words, the higher the involvement load index, the better the mean scores. Meanwhile, the obtained mean scores of the output-oriented tasks with higher levels of involvement turned out to be higher than those of the input-oriented tasks.

Table 4.

Descriptive Statistics for the Collocations Production

Task orientation	Involvement Load	N	Mean	Std. Deviation
Input-oriented Tasks	1	30	17.93	2.875
	2	30	18.86	2.528
	3	30	22.73	4.184
	Total	90	19.84	3.853
Output-oriented Tasks	1	30	21.80	5.598
	2	30	24.33	6.255
	3	30	27.20	4.619
	Total	90	24.44	5.902

The results of the tests of between-subjects effects were checked to probe the possibility of an interaction effect and the main effects of the independent variables (Table 5).

Table 5.

Tests of between-subjects Effects for Collocations Production

	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1778.778 ^a	5	355.756	17.217	.000	.331
Intercept	88267.756	1	88267.756	4271.654	.000	.961
Task orientation	952.200	1	952.200	46.081	.000	.209
Involvement Load	806.978	2	403.489	19.527	.000	.183
Task orientation*	19.600	2	9.800	.474	.006	.005

	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Involvement Load						
Error	3595.467	174	20.664			
Total	93642.000	180				
Corrected Total	5374.244	179				

Table 5 shows a significant interaction between the effects of task orientation and involvement load on the production of lexical collocations, ($F_{(2, 174)} = .474, p < .01$). In other words, there is a statistically significant difference between input- and output-oriented tasks in terms of the impact of involvement level on the production of collocations. However, the index of the partial eta squared shows that the interaction accounts for a negligible amount (.005) of the total variability among the groups. Meanwhile, the effects of input-oriented and output-oriented tasks are significantly different on collocations production ($F_{(1,178)} = 46.081, p < .0005$). Furthermore, there are significant differences in the collocations production test among three involvement load indices of 1, 2, and 3 ($F_{(2,177)} = 19.527, p < .0005$). The Scheffe test was run to locate significant differences.

Table 6.

Scheffe Test Results for the Effects of Involvement Loads on Collocations Production

	(I) involvement load	(J) involvement load	Mean Differences (I-J)	Sig.
Input-oriented tasks	1	2	-.93*	.000
		3	-4.80*	.000
	2	3	-3.87*	.000
Output-oriented tasks	1	2	-2.53*	.000
		3	-2.87*	.000
	2	3	-4.26*	.000

As Table 6 shows, as the involvement load index of both input-oriented and output-oriented tasks increases, the production of lexical collocations seems to get better. Additionally, task orientation and involvement load had the partial eta squared values of .20 and .18, respectively, showing large effect size.

The third research question was intended to compare the effects of input-oriented and output-oriented tasks on the learners' comprehension of lexical collocations after controlling for involvement load. To this end, the participants' scores on the collocations comprehension test in input-oriented and output-oriented groups were compared. Table 7 summarizes the descriptive statistics.

Table 7.

Descriptive Statistics of Comprehension post-test for Input and Output-Oriented Tasks

		N	Mean	Std. Deviation
Load1	Input-oriented	30	17.06	3.567
	Output-oriented	30	20.70	3.421
Load2	Input-oriented	30	18.63	4.382
	Output-oriented	30	23.43	3.298
Load3	Input-oriented	30	22.81	4.770
	Output-oriented	30	26.40	3.668

As Table 7 shows, the input-oriented and output-oriented groups using tasks with different loads of involvement have performed differently on the comprehension post-test. Three independent-samples *t*-tests were applied to check the statistical significance of the observed mean differences. In Table 8, the observed *t*-value and significance level for tasks with the involvement load index of one ($t_{(1,178)} = -7.613, p < .0005$) show a significant difference

between the effectiveness of input-oriented and output-oriented tasks on collocations comprehension. The same conclusion can be made for the other involvement load indices; namely, two ($t_{(1,178)} = -8.102, p < .0005$) and three ($t_{(1,178)} = -4.589, p < .05$). This result suggests that task orientation is a significant factor in the comprehension of lexical collocations at all involvement load levels. At all three involvement load indices, the output-oriented task groups outperformed the input-oriented task groups.

Table 8.

The t-test Results of Comprehension post-test for Input and Output-oriented Tasks

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig.	Mean Dif.
Involvement Load 1	Equal variances assumed	.708	.401	-7.613	178	.000	-3.966
	Equal variances not assumed			-7.613	177.6	.000	-3.966
Involvement Load 2	Equal variances assumed	9.996	.102	-8.102	178	.000	-4.688
	Equal variances not assumed			-8.102	165.3	.000	-4.688
Involvement Load 3	Equal variances assumed	2.975	.086	-4.589	178	.000	-2.911
	Equal variances not assumed			-4.589	166.9	.000	-2.911

Moreover, the index of the strength of association for involvement load indices of one, two, and three turned out to be ($\eta^2 = .24$), ($\eta^2 = .27$), and ($\eta^2 = .10$), respectively, showing that 24, 27, and 10 percent of the total variability between the groups can be ascribed to task orientation.

The fourth research question sought to investigate the effects of input-oriented and output-oriented tasks on the production of lexical collocations. The scores of the participants in input and output-oriented groups on the

production test were compared (Table 9). Three separate independent-samples *t*-tests were used to see if the differences are significant.

Table 9.

Descriptive Statistics of Production Post-test Across Task Orientations

		N	Mean	Std. Deviation
Load1	Input-oriented	30	17.93	2.522
	Output-oriented	30	21.80	3.767
Load2	Input-oriented	30	18.86	2.891
	Output-oriented	30	24.33	3.737
Load3	Input-oriented	30	22.73	3.829
	Output-oriented	30	27.20	3.073

It is clear in Table 10 that all the mean differences between the input-oriented and output-oriented tasks with involvement load indices of one, two, and three were statistically significant. Output-oriented tasks turned to be more effective than input-oriented tasks on the production of collocations.

Table 10.

The T-test Results of Production Post-test for Input and Output-oriented Tasks

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference
Involvement Load 1	Equal variances assumed	11.335	.201	-12.50	178	.000	-3.877
	Equal variances not assumed			-12.50	155.45	.000	-3.877
Involvement Load 2	Equal variances assumed	5.301	.092	-16.28	178	.000	-5.477
	Equal variances not assumed			-16.28	167.43	.000	-5.477

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference
Involvement Load 3	Equal variances assumed	3.820	.502	-14.83	178	.000	-4.477
	Equal variances not assumed			-14.83	170.03	.000	-4.477

Discussion

The findings of this study showed that the higher the involvement load index of input-oriented and output-oriented tasks, the better the comprehension and production of collocations. A number of studies endorse this finding (e.g. Ahmadi Fatalaki, 2014; Asadzadeh Maleki, 2012; Ghabanchi et al., 2012; Hulstijn & Laufer, 2001; Karalik & Merç, 2016; Keating, 2008; Namaziandost, Hosseini & Utomo, 2020; Pourakbari & Biria, 2015; Sarbazi, 2014; Soleimani & Rahmanian, 2015; Soleimani & Rostami Abu Saeedi, 2016; Tahmasbi & Farvardin, 2017). For example, the findings of Hulstijn and Laufer (2001) lend support to this finding because they showed the effectiveness of involvement load on the retention of lexical items through reading. This finding is also in line with that of Sarbazi (2014), who compared the effectiveness of task-induced involvement load on recalling unknown word meaning through three reading tasks. The task which included true-false questions relevant to the glossed words meaning plus composition writing turned out to be the most effective on word recall since it involved the highest involvement load. Further support for this finding comes from Karalik and Merç (2016), who reported that as the involvement load index grew, the lexical items gain and retention increased. However, unlike the present study, their study gave weight to only two constituents of search and evaluation in developing and investigating task efficiency. Asadzadeh Maleki (2012) also

concluded that marginally glossed listening passages accompanied by sentence construction using the target words resulted in the best retention due to the high involvement load compared to two other tasks. In a similar vein, the findings of Keating (2008), in agreement with those of the present study, indicated that both gap-filling (moderate evaluation) and sentence formation (strong evaluation) tasks yielded better achievements than the tasks with no evaluation component. The results of the studies of Ghabanchi, et al. (2012) and Tahmasbi and Farvardin (2017) also endorse the finding of our study. They reported that tasks with higher degrees of involvement were more efficient in immediate and delayed word achievement than tasks with lower loads of involvement. In Tahmasbi and Farvardin's study, too, paragraph writing with the highest involvement load (i.e., moderate need, search, and strong evaluation) was found to be the most efficient task. Soleimani and Rostami Abu Saeedi (2016) and Ahmadi Fatalaki's (2014) findings also corroborate the finding of the present study. They concluded that the learners who received a reading comprehension task with a higher load of involvement were more successful in recalling new lexical items. Moreover, in line with the findings of this study, Namaziandost, Hosseini, and Utomo (2020) emphasized the benefits of using tasks with high loads of involvement.

Moreover, similar to the finding of the present study, Pourakbari and Biria (2015) found that in addition to the index of involvement load, task type played a decisive role in enhancing vocabulary retention. This finding is in contrast with Laufer and Hulstijn's (2001) who claim that task efficacy depends mainly on the involvement level of a task irrespective of task type. Likewise, Soleimani and Rahmanian (2015) concluded that despite the similarity in task type, there was a difference between tasks with different indices of involvement load in terms of effectiveness so that the gap-filling task with higher involvement load contributed more to word achievement.

Contrary to the findings of this study, Ansarin and Bayazidi (2016) found that higher levels of involvement load did not lead to vocabulary improvement. An explanation for this difference may be that, in their study, the target words included only verbs; other parts of speech such as adjectives, nouns, and adverbs were not considered. Moreover, in the study of Snoder (2018), no significant effect was found for task-induced involvement load on improving the receptive and productive knowledge of English noun-verb collocations. There are other studies by Jahangiri and Abilipour (2014) and Un-udom (2018), which provide evidence against the involvement load hypothesis.

Furthermore, the results revealed that task orientation played a determining role as output task groups outperformed input task groups in receptive and productive knowledge of lexical collocations. Evidence backing up this finding can be found in several recent studies (Alcaraz-Mármol & Almela, 2013; Behzadi & Haji Pour Nezhad, 2014; Tahmasbi & Farvardin, 2017; Zarei & Afrash Ab, 2013). Sarani, Mousapour Negari, and Ghaviniat (2013) reported findings similar to those of the present study in that the type of task played a determining role as productive tasks were superior to receptive ones. Tahmasbi and Farvardin (2017) also reached a finding in agreement with that of this study. They found that output tasks, including paragraph writing and sentence writing tasks, were more efficient than input tasks in developing vocabulary comprehension and production. In a similar vein, Shahbazy and Oghli (2015), as well as Zarei and Afrash Ab (2013), corroborate the finding of this study. In their study, productive tasks turned out to be more effective than receptive tasks in vocabulary learning. These results can be justified in light of Swain's (2000) viewpoint that L2 production imposes an additional demand on learners and pushes them to process language more deeply and in a more coherent way.

Unlike the findings of this study, Alcaraz-Mármol and Almela (2013) reported that the group with the highest level of involvement load did not show the best performance on receptive and productive post-tests. One possible reason for such a difference may be that tasks with higher loads of involvement, i.e., the ones with an index of 4, which were used in their study, may have been too complicated for elementary students due to the lack of cognitive knowledge. According to Broeder and Plunkett (1994), careful attention, noticing, and elaborated processing must be involved in successful lexical learning to happen.

In partial agreement with the findings of the present study, Zarei and Moftakhari Rezaei (2016) reported that in vocabulary recall, when tasks were meaning-focused, output-oriented tasks were more efficient. In contrast, input-oriented tasks seemed to be more effective when they were form-focused. However, unlike the present study, in vocabulary comprehension, input-oriented tasks were more effective than output-oriented tasks. To justify this difference, it can be said that the participants of this study were at the intermediate level, while the participants of that study were elementary EFL learners. According to Swain's (2000) Output Hypothesis, output tasks are more challenging than input tasks. When performing these tasks, students are expected to extend their linguistic resources because they are pushed to process, produce, and internalize the language. That is why in Zarei and Moftakhari Rezaei's study, the elementary learners benefited more from input tasks.

In contrast with the ILH and the findings of the present study, Yaqubi, Rayati, and Allemzade Gorgi (2010) reported that the participants in the gap-filling task (Task 1, with an involvement load index of 2) showed a better performance than those in the multiple-choice task (Task 2, with the involvement load index of 3). One possible reason for this difference may be

the differences in the depth of processing and elaboration that tasks provide. Although the former task included an evaluation component, much less cognitive processing was needed to perform it (i.e., choosing the best option from among a finite set) than the latter task, in which students were required to compare several words against one another to fill in the blanks. As Hulstijn and Laufer (2001) state, if students pay enough attention to the properties of words, they will more likely maintain them. Furthermore, the results of that study revealed that the paragraph writing task (Task 3, as an output task) was more effective than Task 1, which was an input task, despite being identical in terms of involvement load index. This finding is in line with the finding of our study, in which output-oriented tasks were more effective than input-oriented tasks in improving participants' collocational knowledge.

Conclusion and Implications

From the findings of the present study, it may be concluded that the instruction of collocations can be more effective if suitably loaded tasks are utilized. Based on the finding that an increase in the level of involvement load of both input- and output-oriented tasks results in better receptive and productive learning of lexical collocations, one can conclude that the tasks that are within learners' proficiency level, and have higher levels of need, search, and evaluation, can assist learners to gain and retain more collocations. In line with this reasoning, students should be involved in more engaging tasks in which their active participation in task performance is needed.

Based on the finding that output tasks were superior to input tasks in enhancing learners' collocational competence, the integration of output tasks like sentence formation and composition writing into educational materials is strongly recommended. When performing these output tasks, learners have to

pay more attention to the newly encountered collocations to create a sentence or write a composition, yielding more collocations gain.

The results of this study can be of practical value for teachers, material developers, and researchers. The findings of this study can help language teachers perceive the value of each task and gain new insight into task design. They can introduce more loaded tasks into classes for better collocations instruction. Moreover, since task orientation was also a decisive factor in determining task effectiveness, teachers should select and apply appropriate input- or output-oriented tasks to optimize the learning process of L2 collocations. The selection of suitable tasks can result in satisfying learning effects. It is worth noting that using collocations to complete tasks can draw learners' attention to them and, consequently, promote their learning, because the first stage of learning lexical items is noticing.

Meanwhile, the finding that input-oriented tasks were less effective than output-oriented tasks on learners' collocational knowledge should not encourage teachers to completely put aside input-oriented tasks. As Schwart (1993) states, the input is necessary for vocabulary acquisition, though it is not enough alone. Therefore, language learners can benefit from more involving input-oriented tasks like multiple-choice tasks in collocations learning. The developers of instructional materials can also enjoy the findings of the present study in devising effective tasks for teaching collocations. Indeed, they can develop appropriate productive tasks and activities to facilitate the learning of lexical collocations. Furthermore, the results of this study might pave the way for researchers to conduct further studies to compare the effectiveness of other types of tasks and instructional programs on the learning of collocations.

References

- Ahmadi Fatalaki, J. (2014). Involvement Load Hypothesis: Word meaning retention across oral and written task types. *International Letters of Social and Humanistic Sciences*, 37(1), 29-45.
- Alcaraz-Mármol, G., & Almela, A. (2013). The involvement load hypothesis: Its effect on vocabulary learning in primary education. *Revista Espanola de Linguistica Aplicada (RESLA)*, 26(1), 11-24.
- Ansarin, A., & Bayazidi, A. (2016). Task type and incidental L2 vocabulary learning: Repetition versus task involvement load. *Southern African Linguistics and Applied Language Studies*, 34(2), 135-146.
- Asadzadeh Maleki, N. (2012). The effect of the involvement load hypothesis on improving Iranian EFL learners' incidental vocabulary acquisition in listening comprehension classes. *Australian Journal of Basic and Applied Sciences*, 6(9), 119-128.
- Behzadi, A., & Haji Pour Nezhad, G. (2014). The effect of two task types on learning English words and idioms. *International Journal of English Language and Literature Studies*, 3(1), 12-20.
- Boers, F., Demecheleer, M., Coxhead, A., & Webb, S. (2014). Gauging the effects of exercises on verb-noun collocations. *Language Teaching Research*, 18(1), 54-74.
- Broeder, P., & Plunkett, K. (1994). Connectionism and second language acquisition. In N. Ellis (Ed.), *Implicit and explicit leaning of language* (pp. 421-53). London: Academic Press.
- Ellis, R. (2003). *Task-based language teaching and learning*. New York: Oxford University Press.
- Ertürk, Z. (2017). The effects of receptive and productive learning tasks on EFL learners' knowledge of collocation and meaning. *Eurasian Journal of Applied Linguistics* 3(2), 59-73.

- Ghabanchi, Z., Davoudi, M., & Eskandari, Z. (2012). Vocabulary learning through input and output tasks: Investigating the Involvement Load Hypothesis. *California Linguistic Notes*, 37(1), 1-18.
- Gholami, N., & Farvardin, M. T. (2017). Effects of input-based and output-based instructions on Iranian EFL learners' productive knowledge of collocations. *International Journal of Applied Linguistics & English Literature*, 6(3), 123-130.
- Hazrat, M. (2015). The effects of task type and task involvement load on vocabulary learning. *Waikato Journal of Education*, 20(2), 79-92.
- Hulstijn, J. H., & Laufer, B. (2001). Some empirical evidence for the Involvement Load Hypothesis in vocabulary acquisition. *Language Learning*, 51(3), 539-558.
- Hüttner, J. (2005). Formulaic language and genre analysis: The case of student academic papers. *Views*, 14(1), 3-20.
- Hyland, K. (2008). As can be seen: Lexical bundles and disciplinary variation. *English for Specific Purposes*, 27(1), 4-21.
- Joe, A. (1998). What effects do text-based tasks promoting generation have on incidental vocabulary acquisition? *Applied Linguistics*, 19(3), 357-377.
- Jahangard, A. (2013). Task-induced involvement in L2 vocabulary learning: A case for listening comprehension. *Journal of English Language Teaching and Learning*, 5(12), 43-62.
- Jahangiri, K., & Abilipour, I. (2014). Effects of collaboration and exercise type on incidental vocabulary learning: Evidence against involvement load hypothesis. *Procedia: Social and Behavioral Sciences*, 98(1), 704-712.

- Karalik, T., & Merç, A. (2016). The effect of task-induced involvement load on incidental vocabulary acquisition. *Mustafa Kemal University Journal of Graduate School of Social Sciences*, 13(35), 77-92.
- Karimi, M., & Jahani, A. (2014). L2 learners' vocabulary learning: Differential effect(s) of comprehension-based vs. production-based proactive/reactive focus on form. *Iranian Journal of Applied Language Studies*, 6(1), 61-90.
- Keating, G. (2008). Task effectiveness and word learning in a second language: The involvement load hypothesis on trial. *Language Teaching Research* 12(3), 365-386.
- Kıvrak, C. & Uygun Gökmen, D. (2019). The effects of task-induced involvement load and input modality on incidental vocabulary learning. *Journal of Language and Linguistic Studies*, 15(4), 1355-1375.
- Krashen, S. (1985). *The input hypothesis: Issues and implications*. New York: Longman.
- Laufer, B. (2003). Vocabulary acquisition in a second language: Do learners really acquire most vocabulary by reading? Some empirical evidence. *The Canadian Modern Language Review*, 59(4), 567-587.
- Laufer, B., & Hulstijn, J. (2001). Incidental vocabulary acquisition in a second language: the construct of task-induced involvement. *Applied Linguistics*, 22(1), 1-26.
- Lewis, M. (1997). *Implementing the lexical approach: Putting theory into practice*. London: Language Teaching Publications.
- McCarty, M. (2005). *Discourse analysis for language teachers*. Cambridge, UK: Cambridge University Press.
- Maftoon, P., & Sharifi Haratmeh, M. (2012). The relative effectiveness of input and output-oriented tasks with different involvement loads on the

- receptive and productive vocabulary knowledge of Iranian EFL learners. *The Journal of Teaching Language Skills (JTLS)*, 4(2), 27-52.
- Marashi, H., & Amirabadi, S. (2017). The impact of information-gap and opinion-gap tasks on EFL learners' lexical collocation achievement. *International Journal of Educational Investigations*, 4(2), 28-38.
- Mármol, G., & Sánchez-Lafuente, A. (2013). The involvement load hypothesis: its effect on vocabulary learning in primary education. *Revista Espanola de Linguística Aplicada (RESLA)*, 26(1), 11-24.
- Martyńska, M. (2004). Do English language learners know collocations? *Investigationes Linguisticae*, 1(XI), 1-12.
- Namaziandost, E., Hosseini, E., & Utomo, D. (2020). A comparative effect of high involvement load versus lack of involvement load on vocabulary learning among Iranian sophomore EFL learners. *Cogent Arts & Humanities*, 7(1), 1-15.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Nesselhauf, N. (2003). The use of collocations by advanced learners of English and some implications for teaching. *Applied Linguistics*, 24(2), 223-242.
- Pourakbari, A. A., & Biria, R. (2015). Efficacy of task-induced involvement in incidental lexical development of Iranian senior EFL students. *English Language Teaching*, 8(5), 122-131.
- Sarani, A., Mousapour Negari, G., & Ghaviniyat, M. (2013). The role of task type in L2 vocabulary acquisition: a case of Involvement Load Hypothesis. *Acta Scientiarum. Language and Culture, Maringá*, 35(4), 377-386.

- Sarbazi, M. (2014). Involvement load hypothesis: recalling unfamiliar words meaning by adults across enders. *Procedia - Social and Behavioral Sciences*, 98(1), 1686-1692.
- Schwartz, B. D. (1993). On explicit and negative data effecting and affecting competence and linguistic behavior. *Studies in Second Language Acquisition*, 15(2), 147-163.
- Shahbazy, G., & Oghli, H. (2015). A Comparative Study of Using Receptive and Productive Tasks on the Vocabulary Development of Upper-Intermediate Iranian EFL Learners. *Studies in English Language Teaching*, 3(2), 153-165.
- Shamsi, M., & Rahimy, R. (2017). The impact of L2 semantic tasks (L2 collocation versus L2 definition) on Iranian Intermediate EFL learners' vocabulary achievement. *International Journal of Research in English Education*, 2(1), 58-67.
- Silva, B., & Otwinowska, A. (2017). Vocabulary acquisition and young learners: Different tasks, similar involvement loads. *International Review of Applied Linguistics in Language Teaching*, 56(2), 1-35.
- Snoder, P. (2018). Improving English learners' productive collocation knowledge: The effects of involvement load, spacing, and intentionality. *TESL Canada Journal/Revue TESL Du Canada*, 34(3), 140-164.
- Soleimani, H., & Rostami Abu Saeedi, A. (2016). The interaction between involvement load hypothesis evaluation criterion and language proficiency: A case in vocabulary retention. *Iranian Journal of Applied Language Studies*, 8(1), 173-194.
- Soleimani, H., & Rahmanian, M. (2015). Visiting involvement load hypothesis and vocabulary acquisition in similar task types. *Theory and Practice in Language Studies*, 5(9), 1883-1889.

- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97-114). Oxford: Oxford University Press.
- Swain, M. (2005). The output hypothesis: Theory and research. In E. Hinkel (Ed.), *Handbook on research in second language teaching and learning* (pp. 471–83). Mahwah, NJ: Lawrence Erlbaum Associates.
- Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *Modern Language Journal*, 82(3), 320-337.
- Tahmasbi, M, & Farvardin, M. (2017). Probing the Effects of Task Types on EFL Learners' Receptive and Productive Vocabulary Knowledge: The Case of Involvement Load Hypothesis. *SAGE Open*, 7(3), 1-10.
- Toth, P. D. (2006). Processing instruction and a role for output in second language acquisition. *Language Learning* 56(2), 319-385.
- Un-udom, N. (2018). The Effects of Task-Induced Involvement on EFL Vocabulary Learning. *Chophayom Journal*, 29(3), 181-196.
- Webb, S. (2005). Receptive and productive vocabulary learning: The effects of reading and writing on word knowledge. *Studies in Second Language Acquisition*, 27(1), 33-52.
- Webb, S., & Kagimoto, E. (2009). The effects of vocabulary learning on collocation and meaning. *TESOL Quarterly*, 43(1), 55-77.
- Webb, S., & Kagimoto, E. (2011). Learning collocations: Do the number of collocates, position of the node word, and synonymy affect learning? *Applied Linguistics*, 32(3), 259-276.
- Woolard, G. (2000). Collocation encourages learners' independence. In M. Lewis (Ed.), *Teaching collocation: Further development in the lexical approach* (pp. 28-46). Oxford: Oxford University Press.

- Yaqubi, B., Rayati, R.A., & Allemzade Gorgi, N. (2010). The involvement load hypothesis and vocabulary learning: the effect of task types and involvement index on L2 vocabulary acquisition. *The Journal of Teaching Language Skills (JTLS)*, 2(1), 145-163.
- Zarei, A. A., & Afrash Ab, M. (2013). The contribution of output-oriented and input-oriented tasks to L2 vocabulary comprehension and production. *International Journal of Management and Humanity Sciences*, 2(S), 1133-1141.
- Zarei, A. A., & Moftakhari Rezaei, G. (2016). The effect of task type and task orientation on L2 vocabulary learning. *Issues in Language Teaching (ILT)*, 5(2), 255-278.
- Zarei, A. A., & Mousavi, M. (2016). The effects of feedback types on Learners' recognition of lexical collocations. *International Journal of Applied Linguistics & English Literature*, 5 (2), 150-158.

Appendices

Appendix A: Pre-test

Fill the following blanks with suitable words. Pay attention to the Persian translation given in parentheses:

1. The politician was ----- condemned for his dishonesty. (شدیدا محکوم کردن)
2. Actors fear him because he is such an -----critic. (منتقد رک و صریح)
3. The play came in for some -----criticism. (نقد شدید)
4. It always ----- me pleasure when I see my children doing well at school. (باعث خوشحالی شدن)
5. It's been a ----- pleasure meeting you. I hope we meet again. (لذت فراوان)
6. Her -----love of the sea inspired her to sail round the world. (علاقه شدید و پرشور)
7. Have you -----a decision yet about the new job? (تصمیم گرفتن)
8. James has done very well this year, -----his exams without any problem. (قبول شدن در امتحانات)
9. It's two o'clock. Let's ----- a start, shall we? Then we can finish by five. (شروع کردن)
10. The nurse walked----- over to the bed. (با عجله راه رفتن)
11. It's an ----- walk into town from here. (پیاده روی راحت و مطلوب)
12. I'm rather glad you ----- the subject. Let's talk. (مطرح کردن موضوع)
13. Whenever----- a speech I always try to get to the point as quickly as possible. (سخنرانی کردن)
14. It is often much more difficult than you'd expect to ----- a habit. (ترک عادت)
15. I ----- a few adjustments to the gears and my bike works much better now. (سازگار شدن)
16. We've decided to ----- a new approach to the parking problem. (روش جدیدی را بکار بردن)
17. We----- a shortcut through a side-street and saved ourselves a 15-minute walk. (میانبر زدن)
18. Several roads were closed, so we had to ----- a detour. (تغییر مسیر دادن)
19. ----- me a ring when you get home. (تلفن کردن)
20. She ----- a few steps towards the bus, then changed her mind and stopped. (راه افتادن)
21. We got up late and had a ----- breakfast. (آهسته و بدون عجله غذا خوردن)
22. We should not make a -----decision; we may regret it later. (تصمیم عجولانه)
23. ----- payment of bills is a good idea. (پرداخت سریع و بموقع)
24. I was happy that my letter received such a ----- reply. (پاسخ فوری)
25. The government ----- a swift action to change the law. (اقدام کردن)
26. We had a ----- glance at the menu and went in. (نگاه سریع)
27. There was a --- rise in the number of students applying to university this year. (افزایش چشمگیر)
28. The number of crimes committed in the city has remained ----- since 2001. (ثابت ماندن)

29. Please don't ----- interrupting me when I'm trying to work. (دایما مانع کار شدن)
30. We ----- danger and decided not to enter the city. It was a wise choice. (احساس خطر کردن)
31. If someone has a ----- tongue, they say unkind things. (زبان تیز و گزنده)
32. Don't do it like that. You're wasting time. (اتلاف وقت)
33. The bank robbers didn't ----- any resistance when the police surrounded them. (مقاومت نکردن)
34. After the war, UN troops were sent into the area to help ----- the peace there. (حفظ صلح و آرامش)
35. Hopes for a ----- peace are, unfortunately, fading fast. (صلح پایدار)
36. Soldiers were sent in to ----- order after the uprising. (بازگرداندن نظم)
37. The government was sending troops to the south where they expected ----- fighting. (نبرد سخت و بی امان)
38. At first there were just minor incidents but soon it developed into ----- war. (جنگ تمام عیار)
39. He believed that the only armies we should have should be ----- forces. (نیروهای حافظ صلح)
40. He put his money in a bank account and hardly ever made a ----- from it. (برداشت کردن پول)
41. He started ----- money at school when he sold the sandwiches his mother had made him to other children. (پول درآوردن)
42. Both two parties will ----- talks throughout the week. (مذاکره کردن)
43. The scandal is expected to ----- the headlines tomorrow. (تیتز اول روزنامه ها شدن)
44. Her husband is ----- a two-year sentence for credit-card fraud. (دوران محکومیت خود را گذراندن)
45. Anyone who commits a crime has to ----- the consequences. (متحمل عواقب و پیامدها شدن)
46. Some judges are more likely to give ----- sentences than others. (مجازات سنگین)
47. He ----- the conclusion that science alone cannot solve the mystery of the universe. (نتیجه گرفتن)
48. The statistics ----- support the view that the economy is heading towards recession. (بطور گسترده حمایت کردن)
49. I ----- a deal with the car salesman and got a 15% discount for cash. (معامله کردن)
50. We made a loss for the first two years, but then things got better and ----- a profit most years ever since. (سود کردن)
51. All around us, small firms were ----- bankrupt. (ورشکسته شدن)
52. She ----- appointments for her boss. (قرار ملاقات گذاشتن)
53. Professor Dae ----- a lecture on the American Civil War. (سخنرانی کردن)
54. I decided to ----- a course in computer programming. (دوره را گذراندن)
55. I have to ----- an exam in biology at the end of term. (امتحان دادن)
56. I had a ----- cold. (سرماخوردگی شدید)
57. I had a ----- cold. (سرماخوردگی جزئی)
58. I actually think their ----- meals are good too. (غذای آماده)
59. When you go to university you will ----- a lot of new friends. (دوست شدن)
60. They are hoping to ----- a family soon. (تشکیل خانواده دادن)
61. Jill ----- her baby yesterday. (صاحب فرزند شدن)
62. They may be having a trial separation and may eventually decide to ---- a divorce. (طلاق گرفتن)
63. My father is ----- bald. (طاس شدن)
64. You find it hard to ----- your temper? (عصبانیت خود را کنترل کردن)

65. You always ----- your word. (به قول خود عمل کردن)
66. You have a tendency to make ----- decisions. (تصمیم های فوری و بی مقدمه)
67. John tried to ----- a picture of the lake. (عکس گرفتن)
68. I'd advise you to ----- a reservation before you go. (رزرو کردن)
69. I always have to look for ----- accommodation. (مکان هایی با قیمت مناسب)
70. As a student, I can't afford to stay in ----- hotels. (هتل های شیک و تر و تمیز)
71. I know next week is a ----- trip. (سفر کاری)
72. I suggest we ----- a day trip to beach on the Sunday. (سفر یک روزه رفتن)
73. ----- woman was selling flowers on the street corner. (خانم چاق و خپل)
74. Her paintings ----- recognition thanks to a major exhibition in New York. (مشهور شدن)
75. In the north the farmers mostly ----- cattle. (پرورش دادن)
76. It was a ----- decision to make. (تصمیم مهم)
77. The chairperson ----- the meeting at 5:00. (پایان یافتن جلسه)
78. The charity exists to ----- the needs of elderly people. (نیازها را برآورده کردن)
79. I was going to ----- that point. (ذکر کردن نکته)
80. I was trying to ----- her a compliment but she misunderstood. (از کسی تعریف و تمجید کردن)
81. We're so glad we decided to ----- a holiday. (مرخصی رفتن)
82. We were ----- a risk as we didn't know exactly what we'd find there. (ریسک کردن)
83. I'd ----- a chance and leave if I were you. (ریسک کردن)
84. Let's ----- a break when you finish this exercise. (استراحت کردن)
85. I hope we'll have time to ----- a chat after the meeting. (با کسی گپ زدن)
86. I ----- a nightmare last night. (کابوس دیدن)
87. I ----- a feeling that something is wrong. (احساس کردن)
88. All that matters in the exam is to ----- your best. (نهایت تلاش خود را کردن)
89. The storm ----- some damage to our roof. (آسیب زدن)
90. My son has to ----- his homework straight after school. (انجام دادن تکالیف)
91. Jill had to ----- a choice between her career and her family. (انتخاب کردن)
92. I'm too tired to o out tonight. Let's ----- an excuse and stay at home. (بهانه آوردن)
93. Would anyone like to ----- any comments on the talk? (اظهار نظر کردن)
94. After ----- Mark a lift to the airport, Cathy made her way home. (کسی را با ماشین رساندن)
95. You must ----- an attempt and study for your exams. (تلاش کردن)
96. She helps me out often, and I ----- the favor when I can. (لطف کسی را جبران کردن)
97. We ----- our seats for the second half of the play. (دوباره سر جای خود نشستن)
98. The boat ----- fire and sank. (آتش گرفتن)
99. Let me ----- an example of how this might happen. (مثالی را ذکر کردن)
100. Everyone ----- silent when they heard the shocking news. (ساکت شدن)

Appendix B: A description of the characteristics of tasks with different involvement load indices.

Table 1
Input tasks and their involvement loads

Task	Index of involvement load	Components	Explanations
True-false	1	Moderate need	The learner is required to learn the target collocations.
	0	No search	The meaning of the target collocations is given.
	0	No evaluation	The learner is not required to compare the target collocations against one another.
Matching	1	Moderate need	The learner is required to learn the target collocations.
	0	No search	The meaning of the target collocations is given.
	1	Moderate evaluation	The learner is required to compare the target collocations against one another.
Multiple-choice	1	Moderate need	The learner is required to learn the target collocations.
	1	Search	The learner is required to look up the meaning of target collocations in a dictionary.
	1	Moderate evaluation	The learner is required to compare the target collocations against one another.

Table 2
Output tasks and their involvement loads

Task	Index of involvement load	Components	Explanations
Short-response	1	Moderate need	The learner is required to learn the target collocations.
	0	No search	The meaning of the target collocations is given.
	0	No evaluation	The learner is not required to compare the target collocations against one another.
Fill-in-the blanks	1	Moderate need	The learner is required to learn the target collocations.
	0	No search	The meaning of the target collocations is given.

	1	Moderate evaluation	The learner is required to compare the target collocations against one another.
Sentence formation	1	Moderate need	The learner is required to learn the target collocations.
	0	No search	The meaning of the target collocations is given.
	2	Strong evaluation	The learner compares the target collocations against one another to create new sentence.

Appendix C: A Sample of Task A (True-false Task)

She helps me out when I have too much to do, and I **return the favor** when I can. He **took the corner** too fast and crashed into a tree. Everyone **fell silent** when they heard the shocking news. The boat **caught fire** and sank. Liz **changed her mind** and didn't go to the party. The lab must have **made a mistake**- this can't be right. I **set my watch** by the clock on the mantelpiece. It's your turn to **do the washing-up**, Sam. Let me **give an example** of how this might happen. We **resumed our seats** for the second half of the play.

Return the favor	لطف کسی را جبران کردن	Take the corner	پیشیدن (اتومبیل)
Fall silent	ساکت شدن	Catch fire	آتش گرفتن
Change one's mind	عقیده خود را عوض کردن	Make a mistake	مرتکب اشتباه شدن
Set watch	تنظیم کردن ساعت مچی	Do the washing-up	ظرفها را شستن
Give an example	مثالی را ذکر کردن	Resume one's seat	دوباره سر جای خود نشستن

Read the following statements carefully and mark each as **True** or **False**.

- 1. She helps me out when I have too much to do, and I return the favor when I can.
 ----- 2. He took the corner too fast and crashed into a tree.
 ----- 3. Everyone became silent when they heard the shocking news.
 ----- 4. The boat got fire and sank.
 ----- 5. Liz changed her mind and didn't go to the party.

Appendix D: A Sample of Task B (Matching task)

She helps me out when I have too much to do, and I **return the favor** when I can. He **took the corner** too fast and crashed into a tree. Everyone **fell silent** when they heard the shocking news. The boat **caught fire** and sank. Liz **changed her mind** and didn't go to the party. The lab must have **made a mistake**- this can't be right. I **set my watch** by the clock on the mantelpiece. It's your turn to **do the washing-up**, Sam. Let me **give an example** of how this might happen. We **resumed our seats** for the second half of the play.

Return the favor	لطف کسی را جبران کردن	Take the corner	(اتومبیل) پیچیدن
Fall silent	ساکت شدن	Catch fire	آتش گرفتن
Change one's mind	عقیده خود را عوض کردن	Make a mistake	مرتکب اشتباه شدن
Set watch	تنظیم کردن ساعت مچی	Do the washing-up	ظرفها را شستن
Give an example	مثالی را ذکر کردن	Resume one's seats	دوباره سر جای خود نشستن

Match each verb in column A with a noun in column B. There is one extra word in column B:

Column A

- 1 catch
- 2 change
- 3 return
- 4 give
- 5 make
- 6 take
- 7 resume
- 8 set
- 9 fall

Column B

- a silent
- b an example
- c a seat
- d a corner
- e (me) a favor
- f fire
- g watch
- h your mind
- i the washing-up
- j the way

Appendix E: A Sample of Task C (Multiple-choice Task)

Please read the following sentences carefully. Decide which answer (A, B, C, or D) best fits each gap.

She helps me out when I have too much to do, and I ----- the favor when I can. He ----- the corner too fast and crashed into a tree. Everyone ----- silent when they heard the shocking news. The boat ----- fire and sank. Liz ----- her mind and didn't go to the party. The lab must have ----- a mistake- this can't be right. I ----- my watch by the clock on the mantelpiece. It's your turn to ----- the washing-up, Sam. Let me ----- an example of how this might happen. We ----- our seats for the second half of the play.

- | | | | |
|--------------|---------|-----------|---------|
| 1. a) back | b) make | c) return | d) do |
| 2. a) made | b) took | c) had | d) gave |
| 3. a) had | b) got | c) became | d) fell |
| 4. a) caught | b) got | c) took | d) burn |

- | | | | |
|------------|-----------|------------|------------|
| 5. a) made | b) turned | c) took | d) changed |
| 6. a) did | b) got | c) made | d) kept |
| 7. a) set | b) made | c) run | d) settle |
| 8. a) make | b) do | c) take | d) get |
| 9. a) take | b) make | c) give | d) offer |
| 10. a) sat | b) put | c) resumed | d) made |

Appendix F: A Sample of Task D (Short response Task)

She helps me out when I have too much to do, and I **return the favor** when I can. He **took the corner** too fast and crashed into a tree. Everyone **fell silent** when they heard the shocking news. The boat **caught fire** and sank. Liz **changed her mind** and didn't go to the party. The lab must have **made a mistake**- this can't be right. I **set my watch** by the clock on the mantelpiece. It's your turn to **do the washing-up**, Sam. Let me **give an example** of how this might happen. We **resumed our seats** for the second half of the play.

Return the favor لطف کسی را جبران کردن

Do the washing-up ظرفها را شستن

Take the corner (اتومبیل) پیچیدن

Give an example مثالی را ذکر کردن

Fall silent ساکت شدن

Resume one's seat دوباره سر جای خود نشستن

Catch fire آتش گرفتن

Change your mind عقیده خود را عوض کردن

Make a mistake مرتکب اشتباه شدن

Set one's watch ساعت را تنظیم کردن

Supply the English equivalents of the following Persian collocations:

- | | |
|---------------------------|-----------------------------|
| 1. لطف کسی را جبران کردن: | 2. ظرفها را شستن: |
| 3. (اتومبیل) پیچیدن: | 4. مثالی را ذکر کردن: |
| 5. ساکت شدن: | 6. دوباره سر جای خود نشستن: |
| 7. آتش گرفتن: | 8. عقیده خود را عوض کردن: |
| 9. مرتکب اشتباه شدن: | 10. ساعت را تنظیم کردن: |

Appendix G: A Sample of Task E (Fill in the blank Task)

Fill each of the following blanks with the English equivalent of the Persian collocations given in parentheses.

She helps me out when I have too much to do, and I return----- (لطف کسی را) when I can. He ----- the corner (اتومبیل پیچیدن) too fast and crashed into a tree. Everyone fell----- (ساکت شدن) when they heard the shocking news. The boat ----- -- fire (آتش گرفتن) and sank. Liz changed ----- (عقیده خود را عوض کردن) and didn't go to

the party. The lab must have -----a mistake (مرتکب اشتباه شدن) - this can't be right. I -
-----my watch----- (ساعت را تنظیم کردن) by the clock on the mantelpiece. It's your turn to
d----- (مثالی را ذکر کردن) of
(مطابقاً), Sam. Let me -----an example (مطابقاً), Sam. Let me -----an example (مطابقاً) of
how this might happen. We -----our seats (دوباره سر جای خود نشستن) for the second half of
the play.

Appendix I: A Sample of Task F (Sentence formation Task)

She helps me out when I have too much to do, and I return the favor when I can. He
took the corner too fast and crashed into a tree. Everyone fell silent when they heard the
shocking news. The boat caught fire and sank. Liz changed her mind and didn't go to the
party. The lab must have made a mistake- this can't be right. I set my watch by the clock on
the mantelpiece. It's your turn to do the washing-up, Sam. Let me give an example of how
this might happen. We resumed our seats for the second half of the play.

Return the favor لطف کسی را جبران کردن

Take the corner (تومیبل) پیچیدن

Fall silent ساکت شدن

Catch fire آتش گرفتن

Change one's mind عقیده خود را عوض کردن

Make a mistake مرتکب اشتباه شدن

Set watch تنظیم کردن ساعت مچی

Do the washing-up ظرفها را شستن

Give an example مثالی را ذکر کردن

Resume one's seats دوباره سر جای خود نشستن

Make a sentence with each of the following collocations:

1. *Return the favor*: -----
2. *Take the corner*: -----
3. *Fall silent*: -----
4. *Catch fire*: -----
5. *Change one's mind*: -----
6. *Make a mistake*: -----
7. *Set watch*: -----
8. *Do the washing-up*: -----
9. *Give an example*: -----
10. *Resume one's seats*: -----